

CLAIMS

What is claimed is:

1. An electromotive adjustment device for adjusting a control element, comprising:
a housing;
a gear mechanism including a plurality of intermeshing gear wheels to define a drive train; and
a drive motor constructed as a brushless motor with an external rotor and including an output journal in driving relationship with the gear mechanism, wherein the output journal has a tooth portion in engagement with a helical spur gear wheel of the gear mechanism.
2. The adjustment device of claim 1, wherein the output journal has an involute gear tooth system with multiple teeth.
3. The adjustment device of claim 1, wherein the output journal has an involute gear tooth system with three teeth.

4. The adjustment device of claim 1, wherein the gear mechanism has an output member, and further comprising a shaft having opposite ends and linked to the output member, said shaft extending through two openings of the housing in opposite relationship so that the ends of the shaft are selectively connectable with the control element in dependence of a rotation direction of the control element.
5. The adjustment device of claim 4, wherein the shaft is a hollow shaft.
6. The adjustment device of claim 1, wherein the gear mechanism has at least two gear stages for reducing a motor speed of the drive motor.
7. The adjustment device of claim 6, wherein the gear mechanism has two gear wheels to define the gear stages, and further comprising a carrier for supporting the gear wheels
8. The adjustment device of claim 7, wherein the drive motor is arranged on the carrier.
9. The adjustment device of claim 1, and further comprising a spring element for moving the control element in one direction.

10. The adjustment device of claim 9, and further comprising a manually operated shaft for setting the spring element under tension.
11. The adjustment device of claim 1, wherein the housing has two housing portions threadably connected to one another at a partition plane.
12. The adjustment device of claim 11, wherein the partition plane is in an area of a mid- plane of the housing.
13. The adjustment device of claim 8, wherein the drive motor has an attachment flange in single-piece configuration with the carrier.
14. The adjustment device of claim 1, wherein the drive motor is selected from the group consisting of synchronous motor and stepper motor, with a revolving field generated electronically.